ABSTRACT OF THE DISCLOSURE

A rear-view monitor for use in vehicles is provided, in which contained are vehicle-mounted image pickup means for picking up images of road in the rear of one's own vehicle at every fixed time; and detection means for detecting an overtaking vehicle by processing road images obtained by the image pickup means. The monitor keeps monitoring of relative movement between one's own vehicle and the overtaking vehicle detected by the detection means. The monitor is characterized in that the image pickup means contain a wide-angle high resolution camera, and the detection means include: first image processing means for processing the whole road images obtained by the image pickup means by sampling image data; second image processing means for processing a part of road images obtained by the image pickup means without sampling image data; and selection means for selecting either the first image processing means or the second image processing means in response to a situation of traffic. Thus, a rear-view monitor for use in vehicles according to the present invention enables monitoring over a wide range, i.e. the far and near distances, under preferable conditions.